

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	202	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 transparent) and "438"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:39
L2	899	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 transparent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:24
L3	52	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 transparent) and "372"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:24
L4	511	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 transparent) and "257"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:43
L5	352	4 not 1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:39
L6	341	5 not 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:39
L7	5	(((flip-chip) or (flip near3 chip)) and surface near3 emi\$6 near3 laser and (substrate near3 transparent)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:44
S1	210	372/50.21.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 15:08

## EAST Search History

S2	12	S1 and flip near3 chip	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2007/05/08 08:07
S3	198	S1 not S2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 12:46
S4	1269	372/50.1.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 13:23
S5	49	S4 and ((flip near3 chip) or (flip-chip))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 13:30
S6	12	372/50.11.ccls. and ((flip near3 chip) or (flip-chip))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 14:15
S7	5	372/50.23.ccls. and ((flip near3 chip) or (flip-chip))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 14:15
S8	411	372/50.11.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 14:20
S9	75	372/50.23.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 14:15

## EAST Search History

S10	130	S8 and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 14:25
S11	534	S4 and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 11:52
S12	524	S11 not S10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 14:26
S13	522	S12 not S9	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 14:26
S14	491	S13 not S5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 14:27
S15	468	S14 not S1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 14:27
S16	129	surface near3 laser same (detect\$3 or photodetect\$3 or photodiode) same ((flip near3 chip) or (flip-chip))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 14:43
S17	2	(("7085300") or ("6999493")).PN.	US-PGPUB; USPAT	OR	OFF	2006/09/14 15:22

## EAST Search History

S18	22	("20010015992"   "20020003231"   "20030109142"   "4906839"   "5123024"   "5239189"   "5298735"   "5475701"   "5491712"   "5574744"   "5577064"   "5648979"   "5737348"   "5757836"   "5761229"   "5799030"   "5812581"   "5812582"   "6069905"   "6078601"   "6081638"   "6597713").PN. OR ("7085300").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/14 15:22
S19	7	("5073041"   "5633527"   "5898191"   "5966399"   "5978139"   "6079860"   "6759803").PN. OR ("6999493").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/14 15:24
S20	1	("7042015").PN.	US-PGPUB; USPAT	OR	OFF	2006/09/14 15:38
S21	28	("4122479"   "4181901"   "4812415"   "5142381"   "5475211"   "5528272"   "5568320"   "5613861"   "5654559"   "5742630"   "5838703"   "5841565"   "5843802"   "5848685"   "5859658"   "5914218"   "5917534"   "5917603"   "5936657"   "5944537"   "5978408"   "6005276"   "6084650"   "6229158"   "6343223"   "6393183"   "6483862"   "6670599").PN. OR ("7042015").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/14 15:41
S22	7466	((transparent near3 substrate) with (quartz or silicon))	US-PGPUB; USPAT	OR	OFF	2006/09/14 16:20
S23	217	((transparent near3 substrate) near3 (quartz and silicon))	US-PGPUB; USPAT	OR	OFF	2006/09/14 16:22
S24	0	((transparent near3 substrate) near3 (quartz and silicon)) and "372"/\$.ccls.	USPAT	OR	OFF	2006/09/14 16:21
S25	0	((transparent near3 substrate) near3 (quartz and silicon)) and "372"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 16:22
S26	172	((transparent near3 substrate) near3 (gaas))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 21:50
S27	2	((transparent near3 substrate) near3 (gaas)) and 372/50.21.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 21:33

## EAST Search History

S28	2	((transparent near3 substrate) near3 (gaas) with ("850 nm"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 21:53
S29	3	((transparent near3 substrate) near3 (gaas) same ("850 nm"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 22:00
S30	5	((transparent near3 substrate) with flip-chip) and "372"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 22:02
S31	16	((transparent near3 substrate)) and "372"/50.21.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/14 22:04
S32	52	((transparent near3 substrate) same (flip-chip)) and (detect\$3 or photodetect\$3 or photodiode or sensor) and surface near5 laser	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/14 22:06
S33	66	VCSEL WITH TRANSPARENT NEAR3 SUBSTRATE	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2006/09/17 11:51
S34	46	S33 and (detect\$3 or photodetect\$3 or photodiode OR SENSOR)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 13:23
S35	185	msm near3 photodiode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 13:24

## EAST Search History

S36	12	S35 and "372"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 14:10
S37	18	372/50.21.ccls. and vcsel and apc	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 15:17
S38	0	372/50.21.ccls. and flip-chip and apc	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 14:30
S39	3	372/50.21.ccls. and flip near3 chip and apc	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 14:30
S40	2	"20040184495"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 15:14
S41	5	372/50.21.ccls. and vcsel and diffraction near3 grating	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/09/17 15:18
S42	2	(("6999493") or ("5724376")).PN.	US-PGPUB; USPAT	OR	OFF	2007/02/21 17:00
S43	8	372/21.ccls. and (vcsel or (surface near3 (emission or emitting))) and ((transparent or transmissive or trasnmitting) near3 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 17:18
S44	0	372/21.ccls. and flip near3 chip	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 17:07

## EAST Search History

S45	16	372/50.21.ccls. and (vcSEL or (surface near3 (emission or emitting))) and ((transparent or transmissive or transmitting) near3 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 17:04
S46	13	372/50.21.ccls. and ((flip near3 chip) or (flip-chip))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 17:09
S47	10	372/50.124.ccls. and ((flip near3 chip) or (flip-chip))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 17:09
S48	601	((flip near3 chip) or (flip-chip)) and (vcSEL or (surface near3 (emission or emitting))) and ((transparent or transmissive or transmitting) near3 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 17:19
S49	309	((flip near3 chip) or (flip-chip)) and (vcSEL or (surface near3 (emission or emitting))) and ((transparent or transmissive or transmitting) near3 substrate) and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 20:51
S50	224	((flip near3 chip) or (flip-chip)) and (vcSEL or (surface near3 (emission or emitting) near3 laser)) and ((transparent or transmissive or transmitting) near3 substrate) and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 20:52
S51	661881	"49" not "50"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 20:51
S52	309	((flip near3 chip) or (flip-chip)) and (vcSEL or (surface near3 (emission or emitting))) and ((transparent or transmissive or transmitting) near3 substrate) and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 20:51

## EAST Search History

S53	224	((flip near3 chip) or (flip-chip)) and (vcsel or (surface near3 (emission or emitting) near3 laser)) and ((transparent or transmissive or transmitting) near3 substrate) and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 11:17
S54	85	S52 not S53	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/21 20:52
S55	18447	die near3 substrate	US-PGPUB; USPAT	OR	ON	2007/02/22 11:04
S56	95	die near3 transparent near3 substrate	US-PGPUB; USPAT	OR	ON	2007/02/22 11:14
S57	0	S56 and "372"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2007/02/22 11:05
S58	1	S56 and "250"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2007/02/22 11:05
S59	1685	silicon near3 transparent near3 substrate	US-PGPUB; USPAT	OR	ON	2007/02/22 11:14
S60	21	S59 and "372"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2007/02/22 11:15
S61	2288	ir near3 diode	US-PGPUB; USPAT	OR	ON	2007/02/22 11:15
S62	74	S61 and "372"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2007/02/22 11:16
S63	648	((flip near3 chip) or (flip-chip)) and (vcsel or (surface near3 (emission or emitting) near3 laser) or (laser near3 diode)) and ((silicon ) near3 substrate) and (detect\$3 or photodetect\$3 or photodiode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 11:18
S64	52	S63 and "372"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 11:31
S65	28	S63 and "250"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 11:37

## EAST Search History

S66	217	S63 and "257"/*.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 11:38
S67	8309	solder near3 adhesive	US-PGPUB; USPAT	OR	OFF	2007/02/22 12:05
S68	27	solder near3 adhesive near3 flip-chip	US-PGPUB; USPAT	OR	ON	2007/02/22 12:05
S69	15689	conductive near3 adhesive	USPAT	OR	OFF	2007/02/22 15:47
S70	1253	S69 and flip-chip	USPAT	OR	OFF	2007/02/22 15:48
S71	6	S70 and "372"/*.ccls.	USPAT	OR	OFF	2007/02/22 17:25
S72	2	ir near3 diodes same vcsel	USPAT	OR	ON	2007/02/22 17:27
S73	0	ir near3 diode with dbr	USPAT	OR	ON	2007/02/22 17:27
S74	5	ir near3 diode same dbr	USPAT	OR	ON	2007/02/22 17:28
S75	0	ir near3 diode with dbr	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:28
S76	0	((ir or infrared) near3 diode) with dbr	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:29
S77	5	((ir or infrared) near3 diode) same dbr	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:30
S78	8	((ir or infrared) near3 diode) with vcsel	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:31
S79	14118	((ir or infrared) near3 diode) 372/50. 124	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:31

## EAST Search History

S80	0	((ir or infrared) near3 diode) and 372/50.124	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:32
S81	1	((ir or infrared) near3 diode) and 372/50.11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:33
S82	3	((ir or infrared) near3 laser) and 372/50.11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:34
S83	1	((ir or infrared) near3 laser) and 372/50.124	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:34
S84	16	((ir or infrared) near3 laser) with dbr	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:36
S85	41	((ir or infrared) with laser) with dbr	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:47
S86	13	S85 and "372"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:47
S87	28	S85 not S86	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:44

## EAST Search History

S88	115	((ir or infrared) with laser) with vcsel	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:47
S89	47	S88 and "372"/*.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/02/22 17:48
S90	1	("6093938").PN.	US-PGPUB; USPAT	OR	OFF	2007/05/08 08:07
S91	2	("6093938").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2007/06/02 21:37
S92	3538	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 (transparent or silicon or si))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 21:40
S93	3361	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 (transparent or silicon))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:08
S94	120	S93 and "372"/*.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:08
S95	953	S93 and "438"/*.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:10
S96	899	((flip-chip) or (flip near3 chip)) and laser and substrate near3 (transparent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:09

## EAST Search History

S97	202	S96 and "438"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:10
S98	899	((flip-chip) or (flip near3 chip)) and laser and (substrate near3 transparent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:22
S99	202	S98 and "438"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2007/06/02 22:12